



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : L061702306 FREESTYLE 31 60.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] L061702306  
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)  
[ISSUEDATE] 6/13/2017  
[MANUFAC] Kino Flo Lighting Systems  
[LUMCAT] CFX-F31 or CFX-F31T  
[LUMINAIRE] FreeStyle 31, w 60 Louver  
[BALLASTCAT] KINO FLO LED-150X or LED-151X  
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND  
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.  
[TEST CONDITION] BRIGHTNESS IS SET TO 100%. COLOR TEMPERATURE IS SET TO 6500K.  
[MORE] TEST IS PERFORMED WITH 60 DEGREE LOUVER.  
[INPUT] 120VAC, 1.04A, 123.48W, 0.99PF, 8%ATHD  
[TEST PROCEDURE] IESNA:LM-79-08

**CHARACTERISTICS**

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 908             |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 7               |
| Total Luminaire Watts           | 123.48          |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criteria (0-180)        | 0.54            |
| Spacing Criteria (90-270)       | 0.56            |
| Spacing Criteria (Diagonal)     | 0.58            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 0.67 ft         |
| Luminous Width (90-270)         | 3.00 ft         |
| Luminous Height                 | 0.00 ft         |

**LUMINANCE DATA (cd/sq.m)**

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|------------------|---------------|----------------|----------------|
| 45               | 174           | 185            | 189            |
| 55               | 75            | 75             | 75             |
| 65               | 76            | 76             | 76             |
| 75               | 124           | 124            | 124            |
| 85               | 307           | 307            | 307            |

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**CANDELA TABULATION**

|             | <u>0</u> | <u>5</u> | <u>10</u> | <u>15</u> | <u>20</u> | <u>25</u> | <u>30</u> | <u>35</u> | <u>40</u> | <u>45</u> |
|-------------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>0.0</b>  | 2358     | 2358     | 2358      | 2358      | 2358      | 2358      | 2358      | 2358      | 2358      | 2358      |
| <b>1.0</b>  | 2324     | 2320     | 2324      | 2328      | 2330      | 2333      | 2334      | 2334      | 2338      | 2341      |
| <b>3.0</b>  | 2246     | 2255     | 2254      | 2251      | 2254      | 2255      | 2263      | 2265      | 2264      | 2267      |
| <b>5.0</b>  | 2136     | 2136     | 2132      | 2137      | 2137      | 2140      | 2143      | 2148      | 2155      | 2154      |
| <b>7.0</b>  | 1986     | 1986     | 1985      | 1993      | 1993      | 1997      | 2002      | 2008      | 2012      | 2013      |
| <b>9.0</b>  | 1828     | 1828     | 1829      | 1826      | 1832      | 1831      | 1835      | 1840      | 1839      | 1849      |
| <b>11.0</b> | 1663     | 1668     | 1668      | 1667      | 1669      | 1670      | 1675      | 1676      | 1684      | 1689      |
| <b>13.0</b> | 1497     | 1496     | 1496      | 1494      | 1499      | 1498      | 1505      | 1507      | 1510      | 1512      |
| <b>15.0</b> | 1317     | 1317     | 1318      | 1325      | 1326      | 1329      | 1334      | 1337      | 1338      | 1339      |
| <b>17.0</b> | 1133     | 1137     | 1145      | 1144      | 1147      | 1149      | 1152      | 1156      | 1156      | 1162      |
| <b>19.5</b> | 924      | 926      | 927       | 928       | 931       | 933       | 938       | 939       | 945       | 945       |
| <b>22.5</b> | 668      | 671      | 671       | 674       | 679       | 677       | 681       | 684       | 687       | 690       |
| <b>25.5</b> | 442      | 442      | 444       | 445       | 447       | 449       | 452       | 455       | 458       | 461       |
| <b>29.0</b> | 237      | 236      | 235       | 238       | 239       | 240       | 242       | 246       | 249       | 251       |
| <b>33.0</b> | 136      | 136      | 136       | 137       | 136       | 136       | 137       | 137       | 138       | 139       |
| <b>37.5</b> | 75       | 75       | 75        | 75        | 75        | 75        | 75        | 76        | 76        | 76        |
| <b>42.5</b> | 33       | 33       | 34        | 34        | 34        | 35        | 35        | 35        | 35        | 35        |
| <b>47.5</b> | 13       | 13       | 13        | 13        | 13        | 13        | 13        | 14        | 14        | 14        |
| <b>55.0</b> | 8        | 8        | 8         | 8         | 8         | 8         | 8         | 8         | 8         | 8         |
| <b>65.0</b> | 6        | 6        | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         |
| <b>75.0</b> | 6        | 6        | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         |
| <b>85.0</b> | 5        | 5        | 5         | 5         | 5         | 5         | 5         | 5         | 5         | 5         |
| <b>90.0</b> | 0        | 0        | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |

**Vert. Angles**      **Horizontal Angles**

|             | <u>50</u> | <u>55</u> | <u>60</u> | <u>65</u> | <u>70</u> | <u>75</u> | <u>80</u> | <u>85</u> | <u>90</u> |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>0.0</b>  | 2358      | 2358      | 2358      | 2358      | 2358      | 2358      | 2358      | 2358      | 2358      |
| <b>1.0</b>  | 2347      | 2349      | 2347      | 2344      | 2343      | 2340      | 2337      | 2346      | 2355      |
| <b>3.0</b>  | 2273      | 2278      | 2270      | 2274      | 2280      | 2282      | 2283      | 2286      | 2290      |
| <b>5.0</b>  | 2157      | 2158      | 2160      | 2163      | 2164      | 2167      | 2166      | 2170      | 2167      |
| <b>7.0</b>  | 2012      | 2012      | 2015      | 2021      | 2021      | 2026      | 2026      | 2026      | 2027      |
| <b>9.0</b>  | 1860      | 1858      | 1865      | 1866      | 1865      | 1863      | 1866      | 1869      | 1870      |
| <b>11.0</b> | 1688      | 1683      | 1685      | 1692      | 1697      | 1696      | 1691      | 1695      | 1694      |
| <b>13.0</b> | 1517      | 1515      | 1521      | 1524      | 1528      | 1525      | 1527      | 1525      | 1526      |
| <b>15.0</b> | 1337      | 1340      | 1344      | 1346      | 1350      | 1349      | 1350      | 1355      | 1356      |
| <b>17.0</b> | 1166      | 1170      | 1172      | 1174      | 1175      | 1178      | 1178      | 1184      | 1183      |
| <b>19.5</b> | 947       | 947       | 951       | 955       | 957       | 960       | 962       | 964       | 964       |
| <b>22.5</b> | 691       | 694       | 695       | 696       | 701       | 699       | 702       | 704       | 706       |
| <b>25.5</b> | 464       | 466       | 469       | 471       | 473       | 473       | 475       | 475       | 476       |
| <b>29.0</b> | 256       | 259       | 260       | 262       | 265       | 265       | 265       | 265       | 266       |
| <b>33.0</b> | 140       | 141       | 141       | 141       | 142       | 142       | 141       | 141       | 141       |
| <b>37.5</b> | 77        | 77        | 77        | 77        | 78        | 78        | 78        | 78        | 78        |
| <b>42.5</b> | 35        | 35        | 35        | 35        | 35        | 35        | 36        | 36        | 36        |
| <b>47.5</b> | 14        | 14        | 14        | 14        | 14        | 14        | 14        | 14        | 14        |
| <b>55.0</b> | 8         | 8         | 8         | 8         | 8         | 8         | 8         | 8         | 8         |
| <b>65.0</b> | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         |
| <b>75.0</b> | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         | 6         |
| <b>85.0</b> | 5         | 5         | 5         | 5         | 5         | 5         | 5         | 5         | 5         |
| <b>90.0</b> | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         |

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**ZONAL LUMEN SUMMARY**

| Zone   | Lumens | %Lamp | %Fixt  |
|--------|--------|-------|--------|
| 0-30   | 777.23 | N.A.  | 85.60  |
| 0-40   | 851.94 | N.A.  | 93.80  |
| 0-60   | 887.85 | N.A.  | 97.80  |
| 0-90   | 907.97 | N.A.  | 100.00 |
| 90-120 | 0.00   | N.A.  | 0.00   |
| 90-130 | 0.00   | N.A.  | 0.00   |
| 90-150 | 0.00   | N.A.  | 0.00   |
| 90-180 | 0.00   | N.A.  | 0.00   |
| 0-180  | 907.97 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 160.23 |
| 10-20   | 381.51 |
| 20-30   | 235.49 |
| 30-40   | 74.71  |
| 40-50   | 28.97  |
| 50-60   | 6.93   |
| 60-70   | 6.64   |
| 70-80   | 6.18   |
| 80-90   | 7.30   |
| 90-100  | 0.00   |
| 100-110 | 0.00   |
| 110-120 | 0.00   |
| 120-130 | 0.00   |
| 130-140 | 0.00   |
| 140-150 | 0.00   |
| 150-160 | 0.00   |
| 160-170 | 0.00   |
| 170-180 | 0.00   |

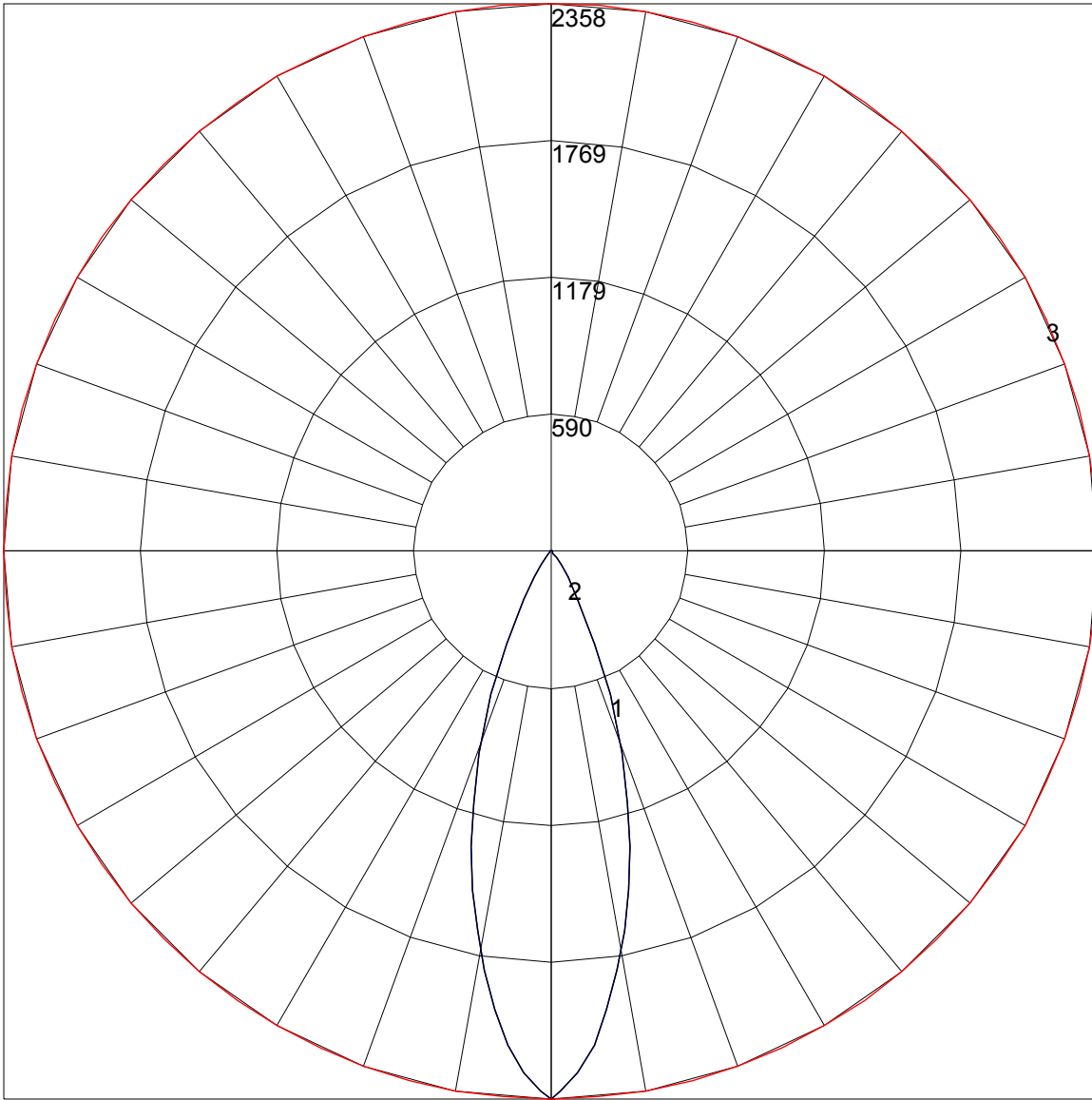
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

| RC | 80  |     |     |     | 70  |     |     |     | 50  |     |     | 30  |     |     | 10  |     |     | 0   |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RW | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 0   |
| 0  | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1  | 114 | 111 | 109 | 107 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 96  | 94  |
| 2  | 109 | 104 | 101 | 98  | 107 | 103 | 99  | 96  | 99  | 97  | 94  | 97  | 94  | 92  | 94  | 92  | 90  | 89  |
| 3  | 104 | 98  | 94  | 90  | 102 | 97  | 93  | 90  | 95  | 91  | 88  | 92  | 89  | 87  | 90  | 88  | 86  | 84  |
| 4  | 100 | 93  | 88  | 85  | 98  | 92  | 88  | 84  | 90  | 86  | 83  | 88  | 85  | 82  | 86  | 84  | 81  | 80  |
| 5  | 96  | 89  | 83  | 80  | 94  | 88  | 83  | 79  | 86  | 82  | 79  | 84  | 81  | 78  | 83  | 80  | 77  | 76  |
| 6  | 92  | 84  | 79  | 75  | 91  | 84  | 79  | 75  | 82  | 78  | 75  | 81  | 77  | 74  | 80  | 76  | 74  | 72  |
| 7  | 88  | 80  | 75  | 72  | 87  | 80  | 75  | 71  | 79  | 74  | 71  | 77  | 74  | 71  | 76  | 73  | 70  | 69  |
| 8  | 85  | 77  | 72  | 68  | 84  | 76  | 71  | 68  | 75  | 71  | 68  | 74  | 70  | 67  | 73  | 70  | 67  | 66  |
| 9  | 82  | 74  | 68  | 65  | 81  | 73  | 68  | 65  | 72  | 68  | 65  | 71  | 67  | 65  | 71  | 67  | 64  | 63  |
| 10 | 79  | 71  | 66  | 62  | 78  | 70  | 65  | 62  | 69  | 65  | 62  | 69  | 65  | 62  | 68  | 64  | 62  | 61  |

POLAR GRAPH



Maximum Candela = 2358 Located At Horizontal Angle = 0, Vertical Angle = 0

# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)

# 2 - Vertical Plane Through Horizontal Angles (0 - 180)

# 3 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)